

(3) Remarks

Claims 1- 29 are now present in this application.

Claims 1-16 were originally filed, and applicant now adds claims 17 – 29. All claims now present in the application are now believed in condition for allowance, which action is earnestly solicited.

Reconsideration of the rejections of claims 1-16 and allowance of all claims are believed in order in view of the above amendments and the following remarks.

Amendments have been made to clarify the points made by the examiner regarding claims 1-16. In addition, claim 16 has been amended to make it independent and new independent claim 24 has been added. Support for the expression “of resistance to a torque” as has been inserted in claim 5 can be found in paragraph 0015.

New independent claims 16 and 24 provide distinguishing features from a different perspective than in the first set of claims, namely claims 1-15.

Claims 1-3 have been rejected under 35 U.S.C. §103 as defining an invention that is obvious from WO 03/029632 (Brendle, *et al.*, as evidenced by U.S. Patent No. 6,974,119) in view of U.S. Patent No. 4,089,505 (Anderle, *et al.*). This rejection is respectfully traversed.

In contrast to the invention, Brendle, *et al.*, does not disclose that a reduction gearing is modularly constructed with a primary gearing and a secondary gearing, which are connected together detachably. Moreover, a self-lock is not disclosed.

Also, contrary to the invention Anderle, *et al.*, does not in any manner disclose or suggest a reduction gearing. Therefore, the limitations to the primary gearing and a secondary gearing, which are connected together detachably, aren't disclosed either.

Accordingly, the present invention is patentable for the following reasons:

1. A reduction gearing is known from Brendle, *et al.* The present invention differs from this prior art in that a reduction gearing comprising a primary gearing and a secondary gearing are built as modules that are detachably connected together and that a self-lock is integrated. Such modules for reduction gearings make it possible that with a small number of devices a large variability of different reduction gearings can be constructed. By using a self-lock, the range for possible applications of the reduction gearing can further be extended because the reduction gearing can be better designed to withstand reactive forces of an actuator element driven by the gearing. This has the advantage that the reduction gearing can be produced more economically and that installation of the gearing can be simplified.
2. The problem to be solved by the invention can therefore be regarded to provide a reduction gearing with smaller production and stock costs.
3. Brendle, *et al.*, shows a reduction gearing that is designed for use in a single application. If a reduction gearing for a different application would be needed, a person skilled in the art would design the reduction gearing of Brendle, *et al.*, according to the needs of the different application. Therefore, a new gearing would be designed. Such a reduction gearing, however, does not solve the problem to be solved by the invention. Brendle, *et al.*, does not give any hints to design a reduction gearing in a modular manner, nor does it give any indication for a self-lock.
4. Anderle, *et al.*, does not give any indication for a solution according to the invention. The traction unit according to Anderle, *et al.*, is based on an arrangement of rods and does not comprise a gearing. Importantly, the element 57 is not a self-lock as stated in the Office Action. According to the description, the

element 57 is a coupling, preferably designed as an overload coupling or a slip clutch (col. 5, l. 3-6). The coupling 57 is arranged between a motor and a shaft. The coupling 57 is designed to limit forces transmitted between the motor and the shaft and therefore to prevent damaging of traction unit and especially of the arrangement of rods. Therefore, the coupling is active when the motor is active. In strong contrast with that, the self-lock according to the invention is active when the motor is turned off, such that reactive forces of a device driven by the reduction gearing can be neutralized.

5. None of the other citations shows a modular reduction gearing with a self-lock. Therefore, a person skilled in the art cannot find any indications in the prior art towards a solution according to the invention.

The invention is nonobvious in the meaning of 35 U.S.C. §103, and the person skilled in the art would not find any useful basis for combining the references, much less to achieve the advantages and solve the problems according to the invention. The subject matter according to the claims is therefore patentable.

Claim 16 is patentable for the following reasons:

1. None of the cited references discloses a self-lock that is formed as an externally activated switchable coupling according to claim 16. Therefore, claim 16 is novel.
2. Brendle, *et al.*, can be regarded as the closest prior art. The invention according to claim 16 differs from this prior art in that the reduction gearing is modularly built and that a switchable self-lock is integrated. This has the advantage that a reduction gearing can be produced more economically and that it can be adapted to different needs when used.

3. The problem to be solved by the invention according to claim 16 can therefore be regarded to provide a reduction gearing with smaller production and stock costs with more flexibility when used.
4. Brendle, *et al.*, does not show modular reduction gearings and does not show a switchable self-lock either. Therefore, Brendle, *et al.*, does not solve the problem solved by the invention according to claim 16 nor does it give any indications for such a solution.
5. None of the cited documents show a switchable self-lock. Therefore, the person skilled in the art cannot find any indications in these documents which would help him to find the solution according to claim 16.

The invention according to claim 16 and the claims dependent on it is novel and nonobvious.

Claim 24 is patentable for the following reasons:

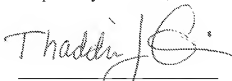
1. None of the documents discloses a gear wheel in engagement with the self-lock which can be decoupled by way of a disengagement button on the housing cover according to claim 24. Therefore, claim 24 is new.
2. Again, Brendle, *et al.*, can be regarded as the closest prior art. The invention according to claim 24 differs from this prior art in that the reduction gearing is modularly built and that a gear wheel is in engagement with the self-lock. The engagement can be decoupled by way of a disengagement button on the housing cover. This has the advantage that a reduction gearing can be produced more economically and that an efficient self-lock is arranged for adapting – by means of a button on the housing cover – the gearing to different needs when used.

3. The problem to be solved by the invention according to claim 24 can therefore be regarded to provide a reduction gearing with smaller production and stock costs with more flexibility when used and a high efficiency.
4. Brendle, *et al.*, does not show modular reduction gears and does not show an efficient, switchable self-lock either. Therefore, Brendle, *et al.*, does not solve the problem solved by the invention according to claim 24 nor does it give any indications for such a solution.
5. None of the cited documents show an efficient self-lock that can be decoupled by way of a disengagement button on the housing cover. Therefore, the person skilled in the art cannot find any indications in these documents which would help him to find the solution according to claim 24.

Therefore, the invention according to claim 24 and the claims dependent on it is new and it is not obvious to find the solution according to the invention.

Applicant has made a significant advance in the art of reduction gearing for electric actuators and has defined it above in claims that demonstrably distinguish from the prior art. Applicant has endeavored to place the application in condition for allowance, and early and favorable action is believed in order and is earnestly solicited. If for any reason the examiner sees need for formal changes, he is invited to call the undersigned.

Respectfully submitted,



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